

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A thermo reversible recording medium comprising:

a substrate; and

a ~~heat~~ thermo sensible layer, on said substrate, made mainly from resin and organic lower molecular weight substance, said ~~heat~~ thermo sensible layer ~~capable of becoming transparent or non-transparent or vice versa~~ reversibly achieving transparent-state and opaque-state depending on temperature,

wherein the organic lower molecular weight substance is a linear hydrocarbon-containing compound having no carboxyl group (A) and selected from

(1) linear hydrocarbon-containing compounds having a urethane bond,

(2) linear hydrocarbon-containing compounds having a sulfonyl bond,

(3) linear hydrocarbon-containing compounds having an oxalic diamide bond,

(4) linear hydrocarbon-containing compounds having a diacylhydrazide bond,

(5) linear hydrocarbon-containing aliphatic compounds having a urea bond and urethane bond,

(6) linear hydrocarbon-containing aliphatic compounds having a urea bond and amide bond,

(7) linear hydrocarbon-containing aliphatic compounds having a plurality of urea bonds,

(8) linear hydrocarbon-containing cyclic compounds having

a urea bond, or

(9) linear hydrocarbon-containing cyclic compounds having an amide bond.

Claim 2 (currently amended): The thermo reversible recording medium according to claim 1 wherein (1), (2), (3), (4), (8) and (9) among linear hydrocarbon-containing compounds (A) have at least one of a phenylene group, cyclohexylene group, cyclohexyl group, phenyl group, and ~~morpholine benzopyrrolidyl~~ heterocyclic ring.

Claim 3 (original): The thermo reversible recording medium according to claim 1 wherein at least one end of the molecule of the linear hydrocarbon-containing compound (A) is a methyl group.

Claim 4 (original): The thermo reversible recording medium according to claim 1 wherein the linear hydrocarbon-containing compound (A) has a melting point of 100°C or more.

Claim 5 (original): The thermo reversible recording medium according to claim 1 wherein at least one of linear hydrocarbon-containing compounds (B) having a melting point lower than the melting point of said linear hydrocarbon-containing compound (A) by 20°C or more and having no carboxyl group is further used as the organic lower molecular weight substance.

Claim 6 (currently amended): The thermo reversible recording medium according claim ~~4~~ 5 wherein the total carbon number of linear hydrocarbons of the linear hydrocarbon-containing compound (A) and the linear hydrocarbon-containing compound (B) is from 6 to 60.

Claim 7 (original): The thermo reversible recording medium according to claim 5 wherein the linear hydrocarbon-containing compound (B) has a melting point of 50°C or more and less than 100°C.

Claim 8 (canceled)

Claim 9 (original: The thermo reversible recording medium according to claim 5 wherein the mixing ratio by weight of the linear hydrocarbon-containing compound (A) to the linear hydrocarbon-containing compound (B) is 80:20 to 1:99.

Claim 10 (canceled)

Claim 11 (original): The thermo reversible recording medium according to claim 5 wherein the linear hydrocarbon-containing compound (B) is at least one selected from fatty esters, ketones having an alkyl group, dibasic acid esters, alcohol difatty esters, aliphatic monoamide compounds and aliphatic monourea compounds.

Claim 12 (canceled)

Claim 13 (currently amended): The thermo reversible recording medium according to claim 1 wherein ~~the clearing a~~ transparent-state upper limit temperature is 115°C or more, the temperature difference between the ~~clearing~~ transparent-state upper limit temperature and ~~the opacifying an opaque-state~~ lower limit temperature is 20°C or less, and the ~~clearing~~ transparent-state temperature range is 30 °C or more.

Claim 14 (original): The thermo reversible recording medium according to claim 1 wherein the resin has a gel

proportion of 30% or more.

Claim 15 (original): The thermo reversible recording medium according to claim 1 wherein at least part of the resin is cross-linked.

Claim 16 (currently amended): A thermo reversible recording label comprising:

~~having two a substrate;~~

~~surfaces, one surface provided with an adhesive layer~~
formed on one side of said substrate; and

~~the other surface provided with a thermo reversible~~
recording medium layer formed on the other side of said
substrate, said thermo reversible recording ~~medium~~ layer
including

a substrate; and

a ~~heat~~ thermo sensible layer, on said substrate, made
mainly from resin and organic lower molecular weight substance,
said ~~heat~~ thermo sensible layer ~~capable of becoming transparent~~
~~or non-transparent or vice versa~~ reversibly achieving
transparent-state and opaque-state depending on temperature,

wherein the organic lower molecular weight substance is a
linear hydrocarbon-containing compound having no carboxyl group
(A) and selected from

(1) linear hydrocarbon-containing compounds having a
urethane bond,

(2) linear hydrocarbon-containing compounds having a
sulfonyl bond,

(3) linear hydrocarbon-containing compounds having an
oxalic diamide bond,

(4) linear hydrocarbon-containing compounds having a
diacylhydrazide bond,

(5) linear hydrocarbon-containing aliphatic compounds

having a urea bond and urethane bond,

(6) linear hydrocarbon-containing aliphatic compounds having a urea bond and amide bond,

(7) linear hydrocarbon-containing aliphatic compounds having a plurality of urea bonds,

(8) linear hydrocarbon-containing cyclic compounds having a urea bond, or

(9) linear hydrocarbon-containing cyclic compounds having an amide bond.

Claim 17 (currently amended): A member comprising:

~~an information memorizing part~~ a memory which stores information; and

a reversible display part which ~~is~~ at least ~~composed of~~ includes a ~~heat thermo~~ sensible layer,

wherein said ~~heat thermo~~ sensible layer is made mainly from resin and organic lower molecular weight substance, said ~~heat thermo~~ sensible layer ~~capable of becoming transparent or non-transparent or vice versa~~ reversibly achieving transparent-state and opaque-state depending on temperature,

wherein the organic lower molecular weight substance is a linear hydrocarbon-containing compound having no carboxyl group (A) and selected from

(1) linear hydrocarbon-containing compounds having a urethane bond,

(2) linear hydrocarbon-containing compounds having a sulfonyl bond,

(3) linear hydrocarbon-containing compounds having an oxalic diamide bond,

(4) linear hydrocarbon-containing compounds having a diacylhydrazide bond,

(5) linear hydrocarbon-containing aliphatic compounds having a urea bond and urethane bond,

(6) linear hydrocarbon-containing aliphatic compounds having a urea bond and amide bond,

(7) linear hydrocarbon-containing aliphatic compounds having a plurality of urea bonds,

(8) linear hydrocarbon-containing cyclic compounds having a urea bond, or

(9) linear hydrocarbon-containing cyclic compounds having an amide bond.

Claim 18 (currently amended): The member according to claim 17 wherein said ~~information memorizing part~~ memory is supported in or held by a holding member, and said reversible display part is provided on said holding member.

Claim 19 (original): The member according to claim 18 wherein said holding member is a card, disk, disk cartridge or tape cassette.

Claim 20 (canceled)

Claim 21 (currently amended): A method of processing an image in which having the step of forming an image on or erasing an image ~~is formed on or deleted~~ from a ~~heat thermo~~ sensible layer made mainly from resin and organic lower molecular weight substance, said ~~heat thermo~~ sensible layer ~~capable of becoming transparent or non-transparent or vice versa~~ reversibly achieving transparent-state and opaque-state depending on temperature,

wherein the organic lower molecular weight substance is a linear hydrocarbon-containing compound having no carboxyl group (A) and selected from

(1) linear hydrocarbon-containing compounds having a urethane bond,

(2) linear hydrocarbon-containing compounds having a sulfonyl bond,

(3) linear hydrocarbon-containing compounds having an oxalic diamide bond,

(4) linear hydrocarbon-containing compounds having a diacylhydrazide bond,

(5) linear hydrocarbon-containing aliphatic compounds having a urea bond and urethane bond,

(6) linear hydrocarbon-containing aliphatic compounds having a urea bond and amide bond,

(7) linear hydrocarbon-containing aliphatic compounds having a plurality of urea bonds,

(8) linear hydrocarbon-containing cyclic compounds having a urea bond, or

(9) linear hydrocarbon-containing cyclic compounds having an amide bond.

Claim 22 (currently amended): The method according to claim 21 wherein the image is formed on said ~~heat~~ thermo sensible layer by using a thermal head.

Claim 23 (currently amended): The method according to claim 21 wherein the image on said ~~heat~~ thermo sensible layer is deleted by using a thermal head or a ceramic heater.

Claims 24 - 26 (canceled)

Claim 27 (new) A member comprising:

a memory which stores information; and

a holding member which holds the memory, wherein a thermo reversible recording label is stuck on one surface of said holding member, said thermo reversible recording label including

a substrate;

an adhesive layer formed on one side of said substrate for sticking said thermo reversible recording label to said holding member; and

a thermo sensible layer, on the other side of said substrate, made mainly from resin and organic lower molecular weight substance, said thermo sensible layer reversibly achieving transparent-state and opaque-state depending on temperature,

wherein the organic lower molecular weight substance is a linear hydrocarbon-containing compound having no carboxyl group (A) and selected from

(1) linear hydrocarbon-containing compounds having a urethane bond,

(2) linear hydrocarbon-containing compounds having a sulfonyl bond,

(3) linear hydrocarbon-containing compounds having an oxalic diamide bond,

(4) linear hydrocarbon-containing compounds having a diacylhydrazide bond,

(5) linear hydrocarbon-containing aliphatic compounds having a urea bond and urethane bond,

(6) linear hydrocarbon-containing aliphatic compounds having a urea bond and amide bond,

(7) linear hydrocarbon-containing aliphatic compounds having a plurality of urea bonds,

(8) linear hydrocarbon-containing cyclic compounds having a urea bond, or

(9) linear hydrocarbon-containing cyclic compounds having an amide bond.